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NEW PRODUCT BULLETIN

SPARTAN FAN

(T.M.)

FEATURES

- Military version of Rotron's famous Muffin fan
- Stainless Steel Ball Bearings
- 110 CFM
- Thin,—only 1½"
- Integral unit—ready to mount
- Airflow reversible
- 115 VAC, 50-60 CPS, Single-phase
- Meets military specifications
- Interchangeable with Muffin fan mounting dimensions.
- Low Noise—Slow speed version available

DESCRIPTION

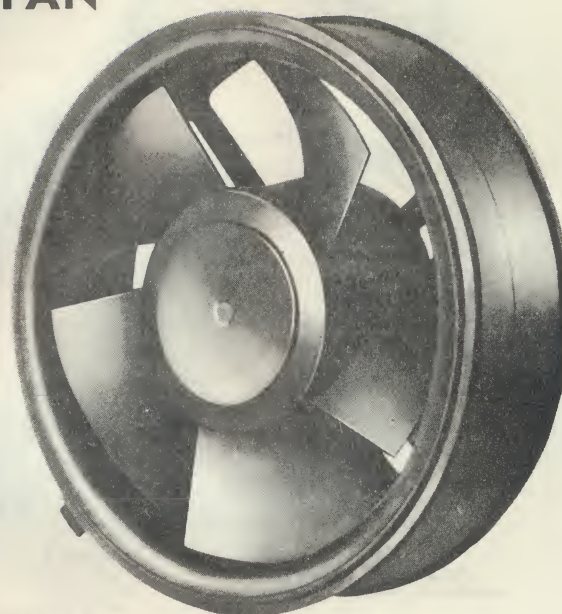
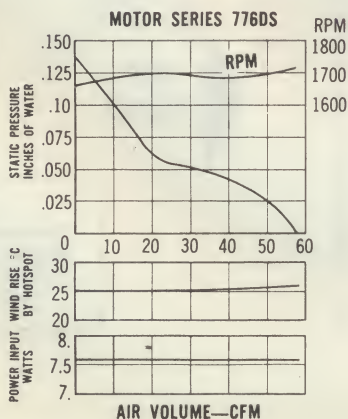
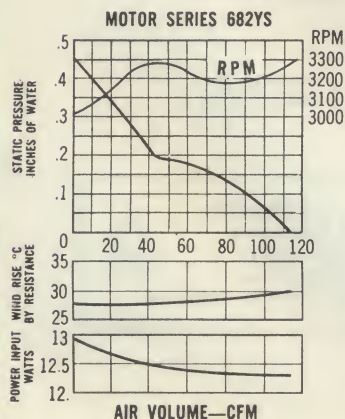
The Spartan Fan is Rotron's answer to a huge demand from customers for a military version of Rotron's famous Muffin fan. It has been designed to deliver up to 100 CFM of air and can be mounted in exactly the same mounting holes as the Muffin fan. Any similarity ends there.

The Spartan Fan, with its 5-blade propeller offers larger Pressure-to-Volume characteristics and incorporates all the utility found in Rotron's vaneaxial and tubeaxial products. It is available in two versions, — (1) with square flanges designed to mount to four mounting holes spaced 4½" apart, and (2) with clamping rings, one on each end of the venturi, to permit fastening to any panel with standard motor mounting clamps. Airflow is instantly reversible simply by turning either version of the fan end-for-end.

A low-noise version of the Spartan Fan is available. The fan can be provided with the Series 776DS designed to operate at 1700 RPM. This fan will produce 57 CFM as shown on the accompanying performance curve.

WHERE TO USE

The Spartan Fan has been designed to meet the rigid demands of military ground applications. It is ideally adaptable for electronic black boxes, power supplies, computer equipment, ground support equipment and other electronic equipment applications where there are relatively free passages for the movement of air.



MATERIALS

The venturi ring, mounting spider and hub are an integral aluminum casting. The mounting spiders and hub are black enameled in accordance with MIL-E-5557, Type IV. The propeller is injection molded in black from an outstanding polycarbonate plastic. The shaft and hardware are corrosion-resistant stainless steel. The impeller runs on two high-precision, double-shielded stainless steel ball bearings which are lubricated for a maximum ambient of 72°C.

MOTOR

The Spartan Fan incorporates a highly efficient, multi-slot ball bearing induction motor which is lubricated for life and suitable for operation in adverse environmental conditions as required under military specifications for ground and shipboard use. It is made for use on 50-60 CPS, 1 phase, 115 Volt lines and is provided with three terminal leads. The fan venturi may be revolved so that the terminal leads are located at a point where they will not interfere with the positioning of adjacent components. The phase-splitting capacitor is not provided by Rotron.

A compact terminal block, as shown in the accompanying drawing, may be provided on order for those cases where the user finds hook-up by this means more convenient than with lead wires.

The stator is wound in accordance with the specifications for Class F insulation. The entire fan passes Government specifications for this type of component.

The Spartan Fan is supplied with the Series 682YS motor for use on 115 VAC, single-phase, 50/60 CPS power. A 1.0 mfd capacitor rated for 220 VAC is required and is not supplied by Rotron. Oil-filled paper dielectric capacitors are recommended.

The low-noise fan uses the Series 776DS motor on 115 VAC, Single-phase, 50/60 CPS power. A 1.5 mfd capacitor rated for 220 VAC is required.

The standard fan is designed for use over a temperature range of —54°C to 72°C. A fan for use at higher temperatures can be provided on special order.

FILTER

The higher pressure characteristics of the Spartan Fan made especially suitable for use with a dust filter. A newly designed filter-box will soon be available.

MOUNTING

Type S — This version contains a square flange on either end of the fan. This flange contains four mounting holes in the corners. These holes are on $4\frac{1}{8}$ " square centers. This type of mounting is directly interchangeable with the mounting of the famous Rotron

Muffin fan. The clips used with the Muffin fan cannot be used for mounting the Spartan Fan as this type of mounting would not meet the requirements of military shock and vibration environments.

Type R — This version contains round mounting rims for use with standard motor mounting clamps. The drawing shows mounting by standard clamp such as those used with other Rotron tubeaxial and vaneaxial fans. In addition, an alternative low cost mounting using Rotron Part No. 16410 is shown on the drawing. The Type R Spartan Fan is designed to mount in a hole in the mounting panel of $4.531 \pm .015$ inches diameter.

